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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ZAMANI, ALI A

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 09/09/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/544,000

Applicant(s)

CATHEY, DAVID A.

Examiner

Ali A. Zamani

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,8-11 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,8-11 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

The indicated allowability of claims 1-5, 8-11 and 19-22 are withdrawn in view of the newly discovered references. Rejections based on the newly cited reference (Dreher, Takami, Schneider et al., Stanek and Eventoff) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 8-10 rejected under 35 U.S.C. 102(b) as being inherently anticipated by Dreher (US Pat. No. 4,551,717).

In regard to claims 1 and 8-10, Dreher discloses a computer keyboard comprising: a n enclosure member; plurality of depressible key switch (10) devices arrayed above said printed circuit board (col.2, lines 60-65); a key cap (11) mounted atop each switch device of plurality, each key cap having at least one identifying graphic symbol (20) (Fig. 3, col. 3, lines 2-3) formed on an upper surface thereof (see Figs 1-3) and luminescent material embedded within each key cap (11) (col. 1, lines 47-50). Further, Dreher teaches a key (10) for use on a terminal with a key cap top has a luminescent material (14) (LED) embedded with the key cap (11)

As to claim 2, Dreher teaches keys for keyboards (col. 1, lines 5-7) and all features are well known in the art.

In regard to claims 3 and 4, Dreher teaches luminescent material embedded within each key cap (Fig. 1, col. 1, lines 47-50) and luminescent material includes luminescent material forming each key cap (Fig. 3, col. 3, lines 2-3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreher in view of Takami (US Pat. No. 4,205,522).

In regard to claims 5 and 11, Dreher discloses computer keyboard comprising: an enclosure member with printed circuit board (Fig. 1), a plurality of depressible key switch devices arrayed above said printed circuit board (col.2, lines 60-65); a key cap (11) mounted atop each switch device of plurality, each key cap having at least one identifying graphic symbol (20) (Fig. 3, col. 3, lines 2-3) formed on an upper surface thereof (see Figs 1-3) and luminescent material embedded within each key cap.

Dreher does not teach a "luminescent material including tritium" within at least one symbol of key cap.

However, Takami discloses an LCD device, which includes a luminescent phosphor, the luminescent phosphor includes a tritium (see the abstract). Thus, it would have been obvious to

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one of ordinary skill in the art at the time of the invention was made to employ the tritium for illuminating the LCD display embedded in the key cap of Dreher because it will provide cheap natural back light source for displaying key designation and would readily understood by those skilled in the art that it would represent an alternative choice for a backlight, which advantageously does not require additional electrical power.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanek (US pat. No. 5,936,554) in view of Schneider et al. (US Pat. No. 6,507,763 B1) and further in view of Eventoff (US Pat. No. 4,451,714).

In regard to claim 19, Stanek disclose a remote keyboard (10) comprising an enclosure member (10); a key cap (26) mounted atop each switch device of plurality of switch devices; each key cap having at least one identifying graphic symbol on a surface thereof (col.4, lines 1-5); and luminescent embedded within a portion of each key (Fig. 3, col. 3, lines 6-10), lines 36-39).

Stank, however does not teach or suggest that a “chemical source of electrical power “ and a “transmitter” and an “insulative material layer covered with circuit traces”.

Schneider et al. discloses a wireless keyboard includes an enclosure member (403), a RF transmitter (410) mounted on enclosure member (403) (Fig. 6a-6C) and a chemical source of electrical power (col. 3, lines 29-32).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the transmitter and chemical source of electrical power of

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Schneider et al. in the keyboard of Stanek to provide a wireless keyboard having interactively illuminating keys, each key is also to a command to dim the key.

The combination of Stanek-Schneider fail to teach or suggest an “insulative material layer covered with circuit traces”. Eventoff however shows the concept of using an insulative material covered with circuit traces (col. 6, lines 13-20) is old. Thus, it would have been obvious to one of ordinary skill in the art to utilize the insulative material of Stanek in the keyboard of Stanek-Schneider to provide a keyboard having switching circuit assemblies without spacers to effect electrical isolation between opposing circuit traces and switch circuits.

As to claim 20, Stanek teaches each key of the keyboard (10) includes luminescent material embedded within a portion of each key cap (see Fig. 3).

As to claim 21, Stanek discloses luminescent material includes luminescent material forming at least one symbol (col. 4, lines 1-5).

Claim Rejections - 35 USC § 103

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dreher - Takami in view of Schneider et al. and further in view of Eventoff.

In regard to claim 22, Dreher-Takami discloses computer keyboard comprising: an enclosure member with printed circuit board, a plurality of depressible key switch devices arrayed above said printed circuit board (col.2, lines 60-65); a key cap mounted atop each switch device of plurality, each key cap having at least one identifying graphic symbol formed on an upper surface thereof and luminescent material embedded within each key cap.

Dreher-Takami teaches a luminescent material including tritium within at least one symbol of key cap.

Dreher –Takami does not teach a “transmitter powered by chemical source of electrical power” and an “insulative material layer covered with circuit traces”.

However, Schneider et al. discloses a wireless keyboard includes an enclosure member (403), a RF transmitter (410) mounted on enclosure member (403) (Fig. 6a-6C) and a chemical source of electrical power (col. 3, lines 29-32). Thus, it would have been obvious to one of ordinary skill in the art to utilize the transmitter of Harrison et al. in the keyboard of Dreher-Takami to provide a remote keyboard with the same power source to power the keyboard to computer communication link. The combination of Dreher-Takami-Schneider fail to disclose an “insulative material layer covered with circuit traces”. However, Eventoff however shows the concept of using an insulative material covered with circuit traces (col. 6, lines 13-20) is old.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the insulative material of Schneider incorporate in the keyboard of Dreher-Takami-Schneider to provide a remote keyboard having using luminescent keys for improved viewing in dark condition.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nebenzahi is made of record to show a type of illuminated keyboard with luminescent material.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Zamani whose telephone number is (703) 308-6414. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe, can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ali Zamani

Septembre 04, 2003



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600